

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A bearing comprising:  
an outer shell;  
a bearing pad concentrically disposed within said outer shell; and  
an elastomeric base material interposed between said outer shell  
5 and said bearing pad; and  
a wave spring between said outer shell and said bearing pad, said spring providing a resilient force through said bearing pad onto a shaft when said shaft is installed in said bearing.
2. (Canceled)
3. (Previously presented) The bearing according to claim 1, wherein said wave spring is helically wound.
4. (original) The bearing according to claim 1, wherein said bearing pad includes from about 6 to about 20 individual pads.
5. (original) The bearing according to claim 4, wherein said bearing pad includes about 12 individual interlinked pads.
6. (original) The bearing according to claim 5, further comprising a plurality of gaps interposed between each of said individual pads, said gaps allowing for size and shape variations of said shaft.

7. (Currently amended) The bearing according to claim 2 1, wherein said elastomeric base material and said spring provide about 4,000 to about 5,000 pounds/inch radial spring rate as measured by the resiliency of said spring and said elastomeric base material to movement by said shaft.

8. (Previously presented) The bearing according to claim 1, wherein said bearing provides a maximum linear resistance to axial motion of about 1 pound with a 20 pound radial load on said bearing.

9. (original) The bearing according to claim 8, wherein said maximum linear resistance to axial motion is about 5 pounds throughout a temperature range from about -65 to about 160 degrees F.

10. (Previously presented) The bearing according to claim 1, wherein said bearing pad comprises a self-lubricating, polymer composite.

11. (original) The bearing according to claim 1, further comprising a lip molded onto said outer shell, said lip providing a wiping action on said shaft during movement of said bearing along said shaft, thereby providing a cleaning mechanism.

12. (Previously presented) A linear bearing comprising:  
an outer shell;  
a bearing pad concentrically disposed within said outer shell;  
a spring between said outer shell and said bearing pad, said  
5 spring providing a resilient force through said bearing pad onto a shaft when  
said shaft is installed in said bearing; and  
an elastomeric base material interposed between said outer shell  
and said bearing pad.

13. (canceled)

14. (Previously presented) The bearing according to claim 12, wherein said spring is a helically wound wave spring.

15. (original) The bearing according to claim 12, wherein said bearing pad includes from about 6 to about 20 individual pads.

16. (original) The bearing according to claim 15, wherein said bearing pad includes about 12 individual pads.

17. (original) The bearing according to claim 15, further comprising a plurality of gaps interposed between each of said individual pads, said gaps allowing for size and shape variations of said shaft.

18. (original) The bearing according to claim 12, wherein said bearing pad comprises a self-lubricating polymer.

19. (original) The bearing according to claim 12, further comprising a lip molded onto said outer shell, said lip providing a wiping action on said shaft during movement of said bearing along said shaft, thereby providing a cleaning mechanism.

20. (original) A linear bearing comprising:

an outer shell;

an elastomeric base material concentrically disposed within said outer shell;

5 a self-lubricating bearing pad including from about 6 to about 20 individual pads;

a helical spring molded integrally within said elastomeric base material, said helical spring providing a resilient force through said bearing pad onto a shaft when said shaft is installed in said bearing; and

10 a plurality of gaps interposed between each of said individual pads, said gaps allowing for size and shape variations of said shaft.

21. (original) A linear bearing according to claim 20, wherein said bearing pad includes about 12 individual pads.

22. (original) A linear bearing according to claim 21, wherein:

said elastomeric base material and said spring provide about 4,000 to about 5,000 pounds/inch radial spring rate as measured by the resiliency of said spring and said elastomeric base material to movement by 5 said shaft;

said bearing provides a maximum linear resistance to axial motion of about 1 pound with a 20 pound radial load on said bearing; and

said maximum linear resistance to axial motion is about 5 pounds throughout a temperature range from about -65 to about 160 degrees F.

23. (Previously presented) A linear bearing for supporting a load along a shaft, said linear bearing comprising:

an outer shell;

5 a bearing pad concentrically disposed within said outer shell, said bearing pad including from about 6 to about 20 individual pads, each of said individual pads comprising a self-lubricating polymer;

a wave spring between said outer shell and said bearing pad, said wave spring providing a resilient force through said bearing pad onto a shaft when said shaft is installed in said bearing;

10 an elastomeric base material interposed between said outer shell and said bearing pad; and

a plurality of gaps interposed between each of said individual pads, said gaps allowing for size and shape variations of said; wherein

15 said elastomeric base material and said wave spring provide about 4,000 to about 5,000 pounds/inch radial spring rate as measured by the resiliency of said wave spring and said elastomeric base material to movement by said shaft;

said bearing provides a maximum linear resistance to axial motion of about 1 pound with a 20 pound radial load on said bearing; and

20 said maximum linear resistance to axial motion is about 5 pounds throughout a temperature range from about -65 to about 160 degrees F.

24. (original) The linear bearing according to claim 23, wherein said bearing pad comprises about 12 individual pads.

25. (Previously presented) A method for moving a load on a shaft through a bearing, comprising:

5 forming a tubular-shaped outer shell of a linear bearing;  
concentrically disposing a self-lubricating bearing pad within said outer shell;  
installing said linear bearing on said shaft;  
providing a resilient force exerted by a device selected from a group consisting of a helically wound wave spring and a combination of a second spring and an elastomeric base material, through said bearing pad onto said shaft;  
attaching a load to said shaft; and  
moving said linear bearing relative to said shaft, thereby moving said load with said shaft within said linear bearing.

26. (canceled)

27. (Previously presented) The method according to claim 25, wherein the second spring is the helically wound wave spring.

28. (original) The method of claim 27, further comprising: providing about 4,000 to about 5,000 pounds/inch radial spring rate as measured by the resiliency of said spring and said elastomeric base material to movement by said shaft.

29. (original) The method according to claim 27, further comprising: providing a maximum linear resistance to axial motion of about 1 pound when said load is about 20 pounds.

30. (original) The method according to claim 27, further comprising cleaning said shaft with a lip molded onto said outer shell, said lip providing a wiping action on said shaft during movement of said bearing along said shaft.

31. (original) A method for moving a ram air door with a ram door actuator having a nut tube mounted on a linear bearing, comprising:

forming a tubular-shaped outer shell of said linear bearing;  
concentrically disposing a self-lubricating bearing pad within said  
5 outer shell;  
installing said linear bearing in a rigid housing;  
providing a resilient force through said bearing pad onto said  
shaft, said resilient force provided by at least one of a spring and an elastomeric  
base material;  
10 providing about 4,000 to about 5,000 pounds/inch radial spring  
rate as measured by the resiliency of said spring and said elastomeric base  
material to movement by said shaft;  
providing a maximum linear resistance to axial motion of about 1  
pound when said load is about 20 pounds;

32. (original) The method according to claim 31, wherein said resilient force is provided with both said spring and said elastomeric base material

33. (Previously presented) The bearing according to claim 1, wherein said bearing pad comprises a plurality of individual pads, each individual pad of said plurality having an inside surface, an outside surface, and an edge, each individual pad separated from an adjacent individual pad by a triangularly shaped gap extending along the edges of the individual pad and the adjacent individual pad, the triangularly shaped gap extending inwardly from the outer surfaces of the individual pads to the inner surfaces of the individual pads, the outer surfaces of the individual pads connected at an apex of the triangularly shaped gap.